COMSATS University Islamabad, Islamabad Campus

DEPARTMENT OF COMPUTER SCIENCE

Reg No.: _____	**Quiz 03 – Spring 2023**	**Date:** 29/05/2023

Program	BSE	**Class & Sec**	5A
Course Name	CSC462 – Artificial Intelligence	**Duration**	15 mins
Instructor's Name	Mr. Hafiz Syed Ahmed Qasim	**Total Marks**	10
Applicable CLO	CLO-3	**Obtained Marks**	

Q1. Convert these into FOL and make inference **(10)**

1. All cats are mammals.
2. Fluffy is a cat.
3. All mammals have hair.

Infer following from above facts using FOL:

Fluffy has hair.

Sol:

∀x Cat(x) → Mammal(x)

Cat(Fluffy)

∀x Mammal(x) → HasHair(x)

To Prove:

HasHair(Fluffy)

Proof:

Cat(Fluffy) → Mammal(Fluffy)

Modus Ponens:

- Cat(Fluffy) → Mammal(Fluffy)
- Cat(Fluffy)
- _____
- Mammal(Fluffy)

Mammal(Fluffy) → HasHair(Fluffy)

Modus Ponens:

- Mammal(Fluffy) → HasHair(Fluffy)
- Mammal(Fluffy)
- _____
- **HasHair(Fluffy)**